

What is claimed is:

1. A compressed air processing system for motor vehicles, comprising:
 - a pressure control unit including at least one valve;
 - an air dryer including at least one valve;
 - a multi-circuit protection valve including at least one valve; and
 - an electronic control unit, said electronic control unit being designed and arranged to control said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and at least one valve of an air suspension system.
2. The compressed air processing system of claim 1, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and the at least one valve of the air suspension system are designed and arranged to form a common structural unit.
3. The compressed air processing system of claim 1, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve, the at least one valve of the air suspension system and said common electronic control unit are designed and arranged to form a common structural unit.
4. The compressed air processing system of claim 1, further comprising:
 - a first structural unit in which said at least one valve of said pressure control unit, said at least one valve of said air dryer and said at least one valve of said multi-circuit protection valve are arranged;
 - a second structural unit in which the at least one valve of the air suspension system is arranged;
 - a pneumatic conduit, said pneumatic conduit being designed and arranged to connect said first structural unit with said second structural unit;

a first electric line, said first electric line being designed and arranged to connect said common electronic control unit with said first structural unit; and

a second electric line, said second electric line being designed and arranged to connect said common electronic control unit with said second structural unit.

5. The compressed air processing system of claim 1, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and said common electronic control unit are designed and arranged to form a common structural unit.

6. The compressed air processing system of claim 1, wherein said common electronic control unit and the at least one valve of the air suspension system are designed and arranged to form a common structural unit.

7. The compressed air processing system of claim 1, wherein said common electronic control unit further includes a common processor being designed and arranged to evaluate and control said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and the at least one valve of the air suspension system.

8. The compressed air processing system of claim 1, further comprising a pilot valve, said pilot valve being designed and arranged to control said at least one valve of said pressure control unit and the at least one valve of the air suspension system.

9. The compressed air processing system of claim 1, further comprising a pilot valve, said pilot valve being designed and arranged to control said at least one valve of said air dryer and the at least one valve of the air suspension system.

10. The compressed air processing system of claim 1, further comprising a pilot valve, said pilot valve being designed and arranged to control said at least one valve of said multi-circuit protection valve and the at least one valve of the air suspension system.

11. The compressed air processing system of claim 1, further comprising a pilot valve, said pilot valve being designed and arranged to control said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and the at least one valve of the air suspension system.

12. The compressed air processing system of claim 1, wherein said multi-circuit protection valve is designed and arranged to protect a first overall brake circuit of the motor vehicle and a second overall brake circuit of the motor vehicle, at least one valve of the air suspension system of the motor vehicle being supplied with compressed air by reservoir containers of the two overall brake circuits of the motor vehicle.

13. The compressed air processing system of claim 1, further comprising a display unit and a data line, said display unit being connected to said common electronic control unit by said data line.

14. A compressed air processing apparatus for a compressed air system, comprising:

- a pressure control unit including at least one valve;
- an air dryer including at least one valve;

a multi-circuit protection valve including at least one valve; and
an electronic control unit, said electronic control unit being designed and arranged to control said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and at least one valve of an air suspension system.

15. The compressed air processing apparatus of claim 14, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and the at least one valve of the air suspension system are arranged in a common housing.

16. The compressed air processing apparatus of claim 14, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve, the at least one valve of the air suspension system and said common electronic control unit are arranged in a common housing.

17. A compressed air system, comprising:

an air suspension system, said air suspension system including at least one valve; and

a compressed air processing system, said compressed air processing system including:

a pressure control unit including at least one valve;

an air dryer including at least one valve;

a multi-circuit protection valve including at least one valve; and

an electronic control unit, said electronic control unit being designed and arranged to control said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and said at least one valve of said air suspension system.

18. The compressed air system of claim 17, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve and said at least one valve of said air suspension system are arranged in a common housing.

19. The compressed air system of claim 17, wherein said at least one valve of said pressure control unit, said at least one valve of said air dryer, said at least one valve of said multi-circuit protection valve, said at least one valve of said air suspension system and said common electronic control unit are arranged in a common housing.

20. The compressed air system of claim 17, further comprising:

- a first housing in which said at least one valve of said pressure control unit, said at least one valve of said air dryer and said at least one valve of said multi-circuit protection valve are arranged;

- a second housing in which said at least one valve of said air suspension system is arranged;

- a pneumatic conduit, said pneumatic conduit being designed and arranged to connect said first housing with said second housing;

- a first electric line, said first electric line being designed and arranged to connect said common electronic control unit with said first housing; and

- a second electric line, said second electric line being designed and arranged to connect said common electronic control unit with said second housing.